

**METHOD OF POLISHING SEMICONDUCTOR COPPER INTERCONNECT
INTEGRATED WITH EXTREMELY LOW DIELECTRIC CONSTANT
MATERIAL**

5 ABSTRACT OF THE DISCLOSURE

A method of polishing metal and barrier layer interconnect integrated with an extremely low dielectric constant material includes steps of (A) preparing a wafer composed of a copper layer and the extremely low dielectric constant material, (B) treating the copper layer chemically to produce a hard and brittle surface residual
10 formed on the surface of the copper layer, (C) keeping polishing the surface residual by ultrasonic waves, (D) polishing a barrier layer of wafer by the ultrasonic waves, thereby polishing the wafer successfully.